

fact very prominently, calling attention to the need of iron men to save humanity. The testimonial of an aged general of the United States Army was used. The writer interviewed the general on an invalid's bed and he was good enough to tell the story of the testimonial, which is in substance as follows: "A friend of mine came to me and said that he had a medicine which he believed would do me great good, and placed a package of it at my disposal. I took one tablet. It seemed to do me good. A few days later he called on me, and after a short conversation I signed a testimonial, because I believed in iron as medicine." The good general was asked, whether he would recognize his friend's name and

he said he would. On mentioning the gentleman's name, he identified it as that of his friend. It may be interesting to note that this gentleman was very active in Washington, and secured in similar ways other testimonials of prominent Washington men, which testimonials were largely used to exploit a very much advertised drug. A physician, and at one time an assistant postmaster general, also gave a testimonial, whether under similar circumstances was not ascertained, because, when the matter was brought to his attention he became angry and refused to discuss his connection with it, but to the writer's knowledge his testimonial did not appear in the public press thereafter.



## HEALTH BOOKEEPING IN THE HARLEM HEALTH CENTER

MYRA M. HULST

*Statistician, East Harlem Health Center, New York City*

THE system of health bookkeeping, as it has been aptly called, which is presented in this article, was planned and applied in the East Harlem Health Center, 345 East 116th Street, New York City. The Center was organized as a national health center demonstration by the American Red Cross, New York County Chapter; the New York City Department of Health, and twenty other agencies, all coöperating under one roof. From the very beginning, it was planned to work out a complete system of records, and if these worked successfully, to make them available to other institutions. Health centers are being widely established in this country and form an increasingly prominent part in the public-health movement, but there is as yet no plan for recording their activities in any comparable manner. This paper is offered as a basis for discussion in the hope that there may result therefrom a standard and comparable system of records for health centers.

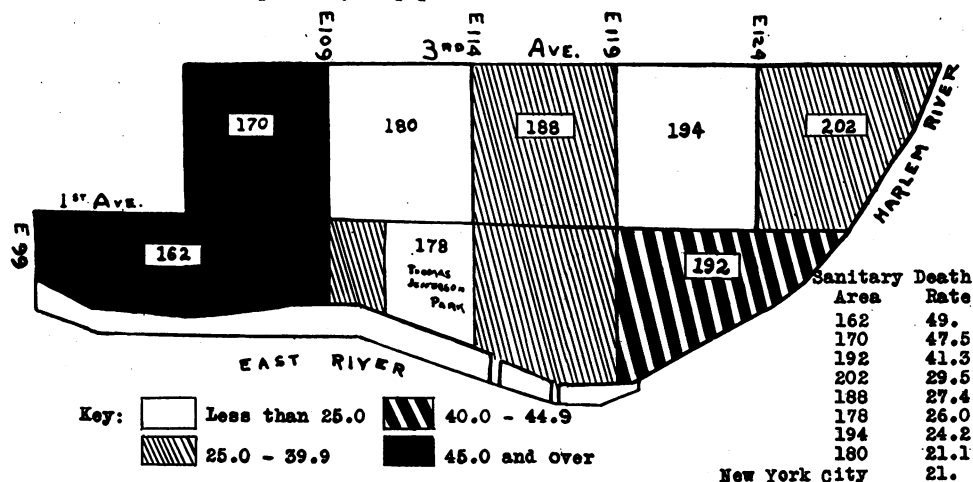
The health bookkeeping here described has been carried on with the advice of the Health Center's director, Kenneth D. Widdemer, and of an advisory statistical committee of which Dr. Louis I. Dublin is chairman. Other members of the committee are Bailey B. Burritt, Dr. William H. Guilfooy, Dr. Louis I. Harris, Dr. Philip Van Ingen, and Professor Robert E. Chaddock.

An important part of statistical work in health centers is the collection and interpretation of the vital statistics of the community. It will mean a great saving in health centers' work to show and to be able to apply facts about the relative importance of different causes of sickness and death in the community and subdivisions of its territory. In this way the health center is aware of the most serious causes of ill health against which there exists most urgent need to concentrate efforts for prevention. The death-rates for the following diseases have been secured from the

## DIPHTHERIA AND CROUP MORTALITY - EAST HARLEM HEALTH CENTER DISTRICT.

Rate per 100,000 population.

Period: 1916-20.



City Department of Health records for East Harlem for a five-year period previous to the opening of the center: typhoid, measles, scarlet fever, whooping cough, diphtheria and croup, influenza, cancer, poliomyelitis, organic heart disease, pneumonia, diarrhea and enteritis, Bright's disease, puerperal causes, accidents, and all other causes. These rates have been analyzed to show areas within the district where there are special disease problems. A comparison has been made of the rates for the district with those of the city as a whole; in smaller communities the rates can be compared with the average for similar types of communities. These statistics have been presented in a small leaflet and made available to organizations co-operating in the Health Center's work. A series of maps of the district presenting these conditions in graphic form accompany the leaflet. The maps are shaded to show the relative prevalence of certain causes of deaths in the different areas of the district. (See illustrated map on diphtheria.)

A nursing organization of long standing in the district found on relating these figures on prevalence of disease to the amount of work done, that the area with the very highest death-rates was

the district from which they had drawn the fewest of their cases. The result of such a revelation was that this organization added two nurses to this area and special educational and nursing work was started there.

In establishing a well-rounded program of infant welfare work, the health center should know the trend of infant mortality over a period of years. The infant mortality rates in East Harlem for a five-year period previous to the opening of the center were secured, and an analysis made of infant mortality by the principal causes of death. It was found that the outstanding causes of infant mortality were diarrheal diseases and pneumonia, and that such conditions as congenital diseases and infectious diseases were comparatively low. Stimulated by these facts, additional work and special educational activities have been started to bring down these high death-rates during the season of the year when these particular causes are at their height.

The population by age groups for the district and its areas has been obtained from the last census. The population figures according to the following age groups are available: under 1 year, (also under 2 years for infant welfare work),

1-4 years, 5-9 years, 10-14, (also 6-16 years for school age), 15-19, 20-44, 45 and over. In starting a program for pre-school children these figures were used to show the number of children in this group in the district. It is important to know the distribution by nationality in a district like the East Harlem where 44 per cent of the population have been born in a foreign country and another 47 per cent are of foreign parentage, one or both parents having been born abroad. The area which has the highest tuberculosis rate in East Harlem has also the largest proportion of Irish and colored population.

Such statistics as have been described above have served the Health Center very effectively in the promotion of different activities. This has been especially true in the promotion of its educational program. The presentation of these facts has aroused the leaders of the community and organizations interested in public welfare, such as churches, settlements, and schools, and has brought to them a realization of the health needs of their community. These organizations, awakened to preventable diseases and deaths occurring among them, are inviting and promoting health classes, lectures, and talks, which are reaching an increasingly large proportion of the people.

A second part of the statistical work of the center is the record- and report-making. The work on record forms and the statistical system fortunately was begun during a period previous to the opening of the East Harlem Health Center. During this preliminary period the records and reports of other existing health centers were studied, together with those of all organizations that were to become a part of the Center. In making up the forms here described the aim has been to select and use only the more comparable and standard items of information. As many as possible of these items have been taken from existing rec-

ords and reports, and an effort has been made to select those most important for the accounting of the Health Center activities and to simplify the whole rather than to add new material. This system by which the Health Center statistics have been gathered and tabulated has stood the test of time and actual working. It has been found to make available in a systematic and orderly way a large body of important facts about the Health Center's activities.

*Direction Slip*—The first form in the series is the direction slip (Form No. 1). This is filled out and given to each applicant at the information desk by the information clerk or telephone operator. Such registration brings about orderliness in the Health Center and facilitates finding the right service. Every one, with the exception of those attending regular classes and lectures, comes to the information desk. Here the needs of the individual are found out and he receives a direction slip to the proper service. These slips are made up in small pads with every other slip for a carbon duplicate on a different colored paper. The slips are also numbered consecutively thus showing the number of visits made to the Center; for example, a slip numbered 6000 would represent the six-thousandth call for service to the Health Center. This consecutive numbering of the slips makes it possible to calculate at any time about how many visits have been made to the Health Center to date. The slips also contain abbreviations which represent all agencies and services in the Center, and those to which the person is directed are checked at the desk. In cases where an agency has several different services, numbers have been used to represent them; for example: A. R. C.—1, 2, 3, 4, 5, stands for American Red Cross, 1. Nutrition Clinic, 2. Oral Hygiene, 3. Dental Operative, 4 and 5. blank for new services which may be added.

7943

Name Carmela Lucia

Room No.

No.

~~D. of H. P. D.~~

1 2 3 4

N. C. D. of H., C. H.

(New Case) 1 2 3 4

M. C. A.

H. S. S.

Cardiac Cl.

Psych. Cl.

Gen. Med. Cl.

O. Therapy S.

Date 4/11/22

Address 324 E. 115 St. Fl. 4

Room No.

No.

A. R. C.

1 2 3 4 5

A. I. C. P.

U. H. C.

~~G. O. S.~~ A3794 (Case

C. C. number)

A. S. H. A.

A. A. C. C.

N. Y. TB. A.

FORM NO. 1 (DIRECTION SLIP)

The applicant receiving the direction slip presents it to the agencies to be visited as indicated thereon, the duplicate being retained at the information desk. In case the agency finds that the person has been misdirected, this is noted on the slip by the agency and the redirection given. Very often the client, because of requiring different kinds of service or treatment, may be referred from one agency to another during the same Health Center visit. This can be noted by the agency without the applicant's return to the information desk. Case numbers are written on the slips by agencies using such numbers and the direction slips collected during the day are returned to the information desk.

*Day Book and Tabulation.*—Directors of health centers and those interested in promoting their activities will want to know to what extent the various services are being used by the community. A very important index of the usefulness of the activities is the record of attendance. The basis for taking the attendance is the daily direction slip. These are counted each day to find out the total attendance at the Health Center. The daily record can be readily calculated by taking the last number of the

preceding day's slips and subtracting it from the last number of the current day's slips, and adding to this the attendance at classes and lectures, etc., to which direction slips are not given. A count can also be taken from the slips of the number of persons receiving service from each of the different agencies. A convenient form in which to keep a classified record of the daily attendance has been found to be the day book (Form No. 2), which, as used in the East Harlem Health Center, is a large loose-leaf note book with columnar ruled pages. The daily entries are made in this book and it forms a convenient reference, which shows at any time how each service is progressing in the number of calls that are coming to it. Although the day book is an elementary form of record, it is valuable in that it indicates the progress from time to time in each service; and the calls received can readily be compared in corresponding weeks or months. In this way decreases or increases will show up in the Health Center's activities, and the director can ascertain at a glance the weaknesses in the services.

The activities in the Health Center have been divided into four different

## FORM NO. 2 (CONDENSED FROM DAY BOOK)

## SERVICE VISITS MADE TO EAST HARLEM HEALTH CENTER

Month of.....192....

Date	Total Visits to H. C.	CLINICS				NURSING			Family Welfare		EDUCATIONAL		
		Total Clinic Visits	Cardiac	Psychi- atric	Similarly Other Clinics	Total Nursing Visits	HenrySt. Visiting Nurse Service	Similarly Other Services	Total Family Welfare Visits	C.O.S.& Similarly Other Agencies	Total Educa- tion Visits	Lectures	Exhibits
1													
2													
3													
4													
.....													
31													
Total													

types, for convenience in reports, namely, clinics, nursing, family welfare, and educational. This classification has been found in the main to work well for a general grouping of services.

In the day book the visits to each of these types are totaled so that the distribution of visits made to the Health Center is brought out. By this arrangement the trend of activities in the Health Center will be shown: for instance, in

the East Harlem Health Center since its opening October 1, 1921, 68 percent of the visits in the Center have been made to clinics. Such percentages will indicate types of work which are not being adequately developed in the health center. At the end of the month the columns in the day book are totaled and from this a monthly statement can be made. The following shows a six months' summary statement of services rendered in the Health Center.

## TOTAL NUMBER OF VISITS MADE TO EAST HARLEM HEALTH CENTER BY PERSONS FOR WHOM SOME SERVICE WAS RENDERED

October 1, 1921, to March 31, 1922

(Population of E. H. H. C. district, 112,199)

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total	Percent of all Visits
To clinics .....	2885	3226	3656	3767	3624	4766	21,924	68.8
To family welfare agencies.....	512	574	542	636	525	529	3,318	10.4
To other health agencies.....	169	376	282	292	177	252	1,548	4.8
To educational agencies .....	255	789	1293	1041	817	911	5,106	16.0
Total .....	3821	4965	5773	5736	5143	6458	31,896	100.0

Graphic charts can be made from the tabulation in the day book which show the trend of the work. A large wall chart with colored tape, representing the growth of services rendered in the whole Center and to the separate services makes an instructive illustration.

*Central Record File.*—A simple record card is kept in the central file, of each person who is given any service by the Health Center. (See Form No. 3.) Every organization which is working in the Center keeps its own records with its specialized data, so that only the sim-

4708

Name—Lucia, Carmela

Address—324 E. 115th St., Fl. 4

Case No.	Agencies	Dates of Visits
A-3794.....	C. O. S.....	Apr. 11 .....
.....	.....	.....
.....	D. of H. P. D. <sup>a</sup>	Apr. 11, May 2, 25 .....
.....	.....	.....
.....	Gen. Med. Cl.	May 30 .....
.....	.....	.....

FORM NO. 3 (CARD FOR CENTRAL RECORD FILE)

plest facts for the identification of the individual need be kept in the central record. Although the day book gives the number of visits paid to the Center, it does not show the number of individuals reached. The items transcribed to Form No. 3 are taken from the direction slips. The cards are filed in alphabetic order and each new record numbered. From the record numbers can be ascertained how many individuals have come to the Center during the month who had not been there previously. They represent also the number of individuals in the community which the Health Center is reaching. On each individual record card are transcribed the dates of visits made and the agency to which these visits are made. Thus the record gives every agency that has had any contact with the individual.

At the end of a year's period of work, the record cards should be tabulated as to certain important items of information. The question as to what extent different districts in the community have been using the health center can be answered by a tabulation of addresses on the record cards. The district units may be streets, blocks, or other geographical areas suited to the type of community. With these facts can be discovered the proportionate use which these areas are making of the health center in comparison with their known health needs, as brought out by statistics on the prevalence of disease and death.

*Monthly Report and Summary.*—As already stated, the Health Center for which this record system was planned is made up of more than twenty health, family welfare and allied organizations. Although few other health centers will have to gather their statistical facts from as many different organizations, even the simplest one-room health center will have several activities such as clinics, classes, and other services which will bring similar problems to them in greater or less degree. The first step in making out a periodical report must be the selection of comparable and standard units of information. Organizations or services doing the same general type of work will need to use terms which have some common meaning and which lend themselves to comparison of results. It was found in this experiment that in many of the organizations the reports which they usually made out could not be compared with those of other similar organizations due to lack of uniformity in the terms used and the dissimilarity of items of information reported. Based on a study of the existing reports of the various organizations coöperating in this Health Center, three types of report forms have been devised which follow the general division used in the day book, namely, nursing, clinic and family welfare. These reports are prepared by the respective agencies from data collected by them and are submitted monthly to the Health Center. The re-

port Forms Nos. 4-A, 4-B, and 4-C\* are a first attempt to bring together some common form of report for the same type of work in the Health Center, and are therefore subject to revision as the work of the Center progresses. An endeavor will be made in these paragraphs to point out why certain items of information have been chosen and to what uses the collected information can be put.

In all types of reports as many items as possible have been based upon the same standards. For example, in each type of report the number of visits outside the Center, that is, the number of home visits, follow-up clinic visits, and all other visits, have been asked for. These items, when compiled from all the agencies or services, give the total visits in the community made by the Health Center nurses and other workers. This information, with the attendance in the Health Center, gives a fairly complete account of the amount of service rendered by the Center. The item of age periods, which appears on the forms above referred to, may need to vary according to the general field of work which the Center has chosen. For all reports in this Center these periods have been so distributed that they may be combined into the following groups: number of children under 5 years of age, children from 5 to 16 years (school age), all ages over 16 years. In clinics doing specialized work these ages have been further subdivided; for example, in work of the baby health station, the period under 2 years of age has been used. These statistics on the work done for various ages can be related to the distribution by ages of the population for the district. Another important relation can be brought out by comparing the amount of actual work done by the Center with the health needs of the district, as shown by

the vital statistics for the various ages of the population.

In the nursing reports, the number of nursing visits made according to the disease are asked for. This information will be used to show, in the case of certain diseases in which the Health Center is especially interested, what ratio exists between the number of visits made and the particular disease. These figures will help in pointing out diseases which are receiving too few or an unduly large number of visits according to the usual standards of nursing. Measures can then be used to bring about a better proportion of visits.

It is of interest and practical importance to the director and administrators of the Health Center to know what sources are sending people to the Center. This information is secured in each report under items of "number of persons referred by." These facts will help to show what coöperation the Health Center is receiving from outside organizations, such as schools and settlements. The information from "number referred by family, neighbor, self" will show to some degree in what favor the Center is held among the people of the community. Such information may point out the need for further advertising of the services to the community which the Center is able to render or to make known its resources through a wider educational campaign.

The facts on the work of the various services as given in the monthly report forms just described are incorporated in a simple summary report. This has been done for a six months' period at present in the East Harlem Health Center and will be carried forward later to a period of a year. A sample of certain items summarized on new clinics is given here.

With health centers in an experimental stage and usually in need of additional financial support, it is of prime importance that they be able to present interesting and accurate information about their accomplishments. Health

---

\*These forms are too long for reproduction here, but copies of them may be obtained by those interested from the East Harlem Health Center, 345 East 116th Street, New York City.

## NEW SERVICES IN THE EAST HARLEM HEALTH CENTER

(Six months' summary, from date of opening, September 1, 1921, to February 28, 1922)

TABLE 1. SOURCE OF NEW CASES

	Total	Gen. Med.	Cardiac	Psychiatric	Nutrition	Oral Hygiene	Dental
Relief or health agency in							
Health Center .....	378	126	18	13	33	128	60
Family, neighbor, self .....	164	85	5	..	..	54	20
Schools and settlements ....	392	42	5	4	31	224	86
Physicians .....	4	2	..	..	..	1	1
	69*						
All others .....	27	2	15	1	9	..	..
Total visits .....	1034	(257*)	43	18	73	407	167
		(69*)					
Revisits .....	638	78	15	22	259	0	264
Total Clinic Visits .....	1672	404	58	40	332	407	431

\*Also 69 teachers in the district have been given examination by the General Medical Examination Clinic.

centers will find it of utmost value to be able to give in their reports and publicity work to the community and the center's supporters a clear idea of their usefulness. Such facts as have been here described should form a ready store of information about the services rendered.

By discriminating use of vital statistics the outstanding health needs of the community can be clearly presented. As time goes on, the continuous vital records and service records will show the relative results accomplished and relative efficiency of the various services.



## HOW ONE RURAL COUNTY SECURED AN EFFICIENT HEALTH DEPARTMENT

THE development of a complete health service for a rural county in the short space of three years is an achievement worthy of notice. This is the record of the Health Department of Arlington County, Virginia, under the leadership of Dr. J. W. Cox. This record is all the more remarkable when it is realized that previous to the establishment of the Health Department there was a total lack of health service in this county, and early efforts met with more than the usual amount of reactionary opposition. The credit for the inauguration of this work belongs to the United States Public Health Service, which placed Dr. Cox's services at the disposal of Arlington County for the purpose of demonstrating what can be accomplished

under the direction of a trained leader.

The story of Dr. Cox's success is a thrilling one. Newspapers which at first refused to print Health Department news now demand, to the point of legal proceedings, this information for their readers. A group of physicians hostile to clinics has become a medical society heartily assisting in their operation. A county supervisor vetoing child welfare work for his district now presses the health officer to accept \$5,000 to build and equip a baby health station for his part of the county. And, most important of all, an apathetic public, now organized through its women into a volunteer army of supporters and defenders of the Health Department, assures the continuance of this work indefinitely.